1. A method for Chemical Mechanical Polishing comprising the steps of:

providing a polisher including a sample holder for holding a sample to be polished, a movable polishing head for holding a polishing pad against said sample with a pressure, a motion inducer for inducing relative motion between said polishing pad and said sample, and a dispenser for flowing polishing slurry onto said sample;

providing a polishing pad having a polishing surface with cavities in the range between 10 and 100 micron diameter in said polishing surface for receiving and embedding of abrasive particles therein;

flowing said polishing slurry onto said sample at a flow rate while inducing relative motion between said polishing pad and said sample for a first polishing time, said polishing slurry containing a first portion of abrasive particles comprising mainly smaller abrasive particles and a second portion of abrasive particles comprising mainly larger abrasive particles;

said first portion of said abrasive particles being embedded into said cavities in said polishing surface of said polishing pad;

said second portion of said abrasive particles not being embedded into said cavities in said polishing surface of said polishing pad; and

greatly reducing said flow rate of said polishing slurry and inducing relative motion between said polishing pad and said sample for a second polishing time.

2. The method of claim 1, wherein said step of greatly reducing said flow rate of said polishing slurry comprises stopping said flowing of said polishing slurry.

3. The method of claim 1, wherein said step of providing a polishing pad having a polishing surface with cavities in said polishing surface includes making said cavities in said polishing surface of said polishing pad.

4. The method of claim 3, wherein said polishing pad is provided with grooves in said polishing surface prior to said making of said cavities in said polishing surface.

5. The method of claim 3, wherein said making of said cavities in said polishing surface of said polishing pad comprises conditioning said polishing pad.

6. The method of claim 5, wherein said conditioning of said polishing pad comprises abrading said polishing surface of said polishing pad with an abrasive disc.

7. The method of claim 6, wherein said abrasive disc comprises a #20 – 200 grit diamond disc and wherein said cavities comprise 10-40% of the surface area of said polishing pad.

8. The method of claim 1, wherein said step of providing a polishing pad having a polishing surface with cavities in said polishing surface comprises providing an open pore polishing pad.

9. The method of claim 5, wherein said conditioning of said polishing pad is performed ex-situ.

10. The method of claim 5, wherein said conditioning of said polishing pad is performed in-situ in said polisher.

11. The method of claim 1 wherein said sample comprises a metal layer atop a semiconductor wafer.

12. The method of claim 11 wherein said metal layer comprises copper.

13. The method of claim 11, wherein said metal layer has a topography including steps of height greater than 50 nm.

14. The method of claim 13, wherein said steps are reduced to a height of 50 – 200 nm during said first polishing time.

15. The method of claim 14, wherein said steps are reduced to a maximum height of 5-50 nm during said second polishing time.

16. The method of claim 1, wherein said pressure is on the order of 1.5 psi.

17. The method of claim 1, wherein said pressure is on the order of 2.7 psi

18. A method of forming a Cu/ALD barrier layer metal gate on a wafer portion, said Cu/ALD barrier layer metal gate having a stacked gate electrode comprising PVD and electroplated Cu atop an ALD barrier layer, said method including Cu CMP comprising the steps of:

providing a polisher including a sample holder for holding said wafer portion, a movable polishing head for holding a polishing pad against said

wafer portion with a pressure, a motion inducer for inducing relative motion between said polishing pad and said wafer portion, and a dispenser for flowing polishing slurry onto said wafer portion;

providing a polishing pad having a polishing surface with cavities in said polishing surface for receiving and embedding of abrasive particles therein;

flowing said polishing slurry onto said wafer portion while inducing relative motion between said polishing pad and said wafer portion for a first polishing time, said polishing slurry containing abrasive particles, a portion of said abrasive particles being embedded into said cavities in said polishing surface of said polishing pad; and

stopping said flowing of said polishing slurry and inducing relative motion between said polishing pad and said wafer portion for a second polishing time.

19. The method of claim 18, wherein said ALD barrier layer comprises Ta or TaN.

20. The method of claim 19, wherein said ALD barrier layer has a thickness in the range between 5 and 50 Angstroms.